WHAT IS CLAIMED IS:

1. An exopolysaccharide produced by a bacterium comprising the following characteristics: Gram negative, bacilliary, about 0.2X0.8 μm, facultative anaerobe, grows between 15°and 45°C with a temperature optimum of 37°C, grows between pH 4-11 but not at pH 2, grows in AB13 medium or minimal medium, is motile, lacks a capsule, lacks spores, and produces an elastic, exopolysaccharide with a sugar content of galactose, fucose, glucose, mannose in a ratio of about 1:2:3:6.

2. The exopolysaccharide produced by the bacterium of claim 1, wherein the bacterium further comprises the characteristics of an antibiotic sensitivity profile as in Table 2, a biochemistry profile as in Table 3, and a carbon utilization profile as in Table 4.

3. The exopolysaccharide produced by the bacterium of claim 1, wherein the bacterium further comprises the total protein SDS-PAGE profile of the LAB-1 strain of FIGURE 2 and FIGURE 3.

4. The exopolysaccharide produced by the bacterium of claim 1, wherein the bacterium further comprises the characteristics of a 16S rRNA gene of SEQ ID NO: 1.

5. An exopolysaccharide produced by a bacterium comprising the 16S rRNA gene of SEQ ID NO: 1.

6. An exopolysaccharide, wherein said exopolysaccharide consists essentially of neutral sugars migrating at the same rate as mannose, fucose, fructose and galactose, acidic sugars migrating at the same rate as fucose and amine sugars migrating at the same rate as glucose and fucose, wherein the sugar ratio of galactose:fucose:glucose:mannose is about 1:2:3:6.

7. An exopolysaccharide produced by the LAB-1 strain at ATCC No. PTA-2500.

8. The exopolysaccharide of claims 1-7, for use as a biofilm in soil treatments.

9. A biofilm comprising the exopolysaccharide of claims 1-7.

10. The biofilm of claim 9, wherein the biofilm is used to plug open conduits.

11. The biofilm of claim 9, wherein the biofilm is deposited in a subsurface biofilm cutoff wall.

12. The biofilm of claim 9, wherein the biofilm is deposited in a subsurface liner consisting of compacted, biofilm treated soil.

13. The biofilm of claim 9, wherein the biofilm is used to treat a geotextile to create a liner.

14. A process for plugging a permeable stratum, comprising the steps of a) providing the biofilm of claim 9 into a permeable stratum, b) incubating said biofilm for an amount of time sufficient to produce a plugged stratum.

15. The process of claim 13, wherein the plugged stratum has a saturated hydraulic conductivity equal to or less than 1.0×10^{-7} cm/sec.

16. The process of claim 13, wherein the plugged stratum has a saturated hydraulic conductivity equal to or less than 1.5×10^{-8} cm/sec.